

SYNCHRONIZATION IN OFDM SYSTEMS

ABSTRACT

Highly effective systems and methods for synchronizing OFDM receiver parameters to an OFDM transmitter are provided. These parameters may include carrier frequency, burst timing, and cyclic prefix length. These systems and methods incorporate special structural features into the OFDM signal to facilitate synchronization. In one embodiment, a supplemental cyclic prefix is added to an OFDM signal to facilitate synchronization. In an alternative embodiment, a synchronization burst with a periodic structure is used to facilitate synchronization. According to the present invention, synchronization may be maintained even if low cost analog oscillator components are used.

09645168-020399